ASSESSMENT FORM

Functional Area: MG	Objective No.: 1	Date: September 20, 2000

OBJECTIVE: The ISMS documentation at the Directorate level is consistent with the LLNL ISMS. An integrated process has been established and is utilized to identify and prioritize specific mission discrete tasks, mission process operations, modifications and work items. (CE 1-1, CE I-2, CE 1-4, CE 1-5, CE I-7, CE II-1, CE II-6)

Criteria

1. Plans, programs, policies and procedures established by Directorate Implementation Plans are effective mechanisms for implementing the LLNL ISM System.

2. Plans, programs, and processes are in place to ensure the remaining gaps between the practices and processes identified in the ISMS Description and actual practice are identified and will be completed in a timely manner.

3. Procedures and/or mechanisms that require line management to identify and prioritize work (mission related tasks and processes, modifications, and work items) is in place, roles and responsibilities are documented, and utilized by personnel.

4. Personnel whose role is to participate in the identification and prioritization of these mission-related items demonstrate competence to execute their responsibilities.

5. Procedures and/or mechanisms are in place and utilized by personnel that ensure identified work (i.e., mission-related tasks and processes, facility or process modification, maintenance work, etc.) can be accomplished within the standards and requirements identified for the facility.

6. Procedures and/or mechanisms are in place and implemented to provide for change control of approved tasks, prioritization, and identification of resources.

7. Processes implement DEAR 970.5204-2, *Integration of Environment, Safety and Health into Work Planning and Execution*, requirements into sub-contracts involving complex or hazardous work.

Approach

Record Review: Review the LLNL ISMS Description (Version 3.0), appropriate Directorate Implementation Plans and gap analyses. Determine the fidelity of directorate ISM implementing documents and their responsiveness to ISM guiding principles and core functions, including worker involvement. Determine whether the directorates and facilities verified in Superblock and site-wide Phase B reviews adequately sample site-wide implementation and associated gaps. Review the Laboratory "gap" analyses and determine the validity of identified gaps between the processes and actual practice. Confirm the validity of the gap analyses between the ISMS

Description and the Directorate Implementation Plans. Review the Laboratory's path forward for completion of the gaps and determine its reasonableness.

Review the facility or activity long-range planning documentation. This should include such items as summary schedules, plan of the week, long-range maintenance schedules, modification schedule, etc. Review the procedures and mechanisms that line managers utilize and their documented roles and responsibilities to identify and prioritize mission-related tasks and processes, modifications, and work items.

Review organizational documentation, mechanisms, and procedures to determine the personnel positions with responsibility associated with this objective. Review the position descriptions for those positions. Review the personnel records that identify the individual qualifications that meet the elements of the position descriptions. Review any training or qualification expectations in LLNL training and qualification manuals that support gaining or verifying competence to fill the positions.

Review the procedures and/or mechanisms that are utilized by the facility or activity to ensure that identified work is accomplished in accordance with established standards and requirements. Sample their implementation in concert with SME team members to ensure contractual requirements and standards flow down as part of the defined ISMS.

Select a sample of mission tasks for the directorates being reviewed, from the DOE programs and planning documents. Track the tasks through LLNL's implementation process to evaluate how MG1 criteria are met. Review future year planning and current year authorized work. Select examples from current year authorizations for directorates being reviewed and track change control for approved tasks, mission process operations, modifications, and/or individual work items. Ensure relative prioritization is consistent with risk and ES&H resources provided.

Select a sample of contractor subcontracts to verify that ISM requirements are included. Specifically, verify that DEAR 970.5204-2, *Integration of Environment, Safety and Health into Work Planning and Execution* and other clauses such as those required by DOE O 440.1, sections 13 and 14 are incorporated.

Interviews: Interview management personnel responsible for the identification and prioritization of work. Determine whether ES&H resources are available and allocated based upon hazards present.

Observations: Observe work definition and planning activities such as plan of the week meetings, long-range scheduling meetings, etc.

<u>Record Review:</u>

- Biology and Biotechnology Research Program Directorate Integrated Safety Management System Implementation Plan, August 2000
- UCRL-AR-133869 Rev 3, Chemistry & Material Science Directorate Integrated Safety Management System Implementation Plan, (CMS 330-r3) August 2000
- L-24943, Laser Programs Integrated Safety Management Systems Implementation Plan, Version 4.0, August 2000
- PSISMP, Physics Directorate Integrated Safety Management System Implementation Plan, Version 1.0, Revision 5, August 25, 2000
- UCRL-AR-132791, LLNL Integrated Safety Management System Description, Version 3.0, February 14, 2000
- DDOAM-00-06, Overview of Institutional Roles, Responsibilities and Functions, Revision 2, August 25, 2000
- BBRP Integrated ES&H Program Management Plan, April 2000
- BBRP Quality Management Program Plan, March 2000
- BBRP Training Plan, March 2000
- BBRP Self Assessment Program Plan, March 2000
- CMS 305, C&MS ES&H Self Assessment Plan, Revision 6, April 2000
- CMS 802, C&MS Training Program, Revision 1, September 1997
- CMS 901, C&MS Quality Assurance Plan, Revision 2, March 2000
- L-15894, Laser Programs Facility Management Plan for Environment, Safety and Health, Revision 5, August 2000
- L-12666, Laser Programs Training Plan, Revision 4, March 2000
- L-18724, Laser Programs Quality Assurance Plan, Revision 3, September 1998
- L-19798, Laser Programs Quality Assurance Implementation Plan, Revision 3, December 1998
- Laser Programs ISM Reference Guide
- L-14352, Laser Programs ES&H Self Assessment Program Plan, Revision 2, June 1999
- Physics Directorate Integrated Safety Management Handbook, Version 1, Revision 3, April 2000
- Physics Directorate ES&H Self Assessment Plan
- Physics Directorate Training Plan
- C&MS Directorate Gap Analysis, September 2000
- BBRP Directorate Gap Analysis, September 2000
- Lasers Directorate Gap Analysis, September 2000
- Physics Directorate Gap Analysis, September 2000
- PATISMIP, Version 1.0, Rev. 0, Physics and Advanced Technologies Directorate Integrated Safety Management System Implementation Plan (Draft), October 1, 2000
- NIF-0054160, NIF Programs Directorate Integrated Safety Management System Implementation Plan (Draft), October 1, 2000

<u>Interviews Conducted</u>:

- BBRP Assistant to AD, Facilities and Safety
- BBRP Assurance Manager
- C&MS DAD/Operations

- C&MS Facility Manager
- C&MS Site 300 Manager
- C&MS DAD/Planning, Development and Personnel
- Lasers DAD/Operations
- Lasers Assurance Manager
- Physics DAD/Operations
- Physics Facility Manager
- Physics Assurance Manager
- Site 300 Manager

Observations:
- Physics - Long Range Planning Meeting
- BBRP – Long Range Planning Meeting
- Briefing – Integrated Safety Management Planning & Implementation in NIF Programs Directorate, September 12, 2000
- Briefing – Merger of Physics and Laser Programs into the Physics and Advanced Technologies Directorate, September 15, 2000

Discussion of Results:

1. Plans, programs, policies and procedures established by Directorate Implementation Plans are effective mechanisms for implementing the LLNL ISM System.

The LLNL Integrated Safety Management System (ISMS) Description requires that "each Directorate at LLNL prepare a Directorate specific Integrated Safety Management System Implementation Plan (IP). The IP will summarize the mechanisms in place (plans, programs, policies, procedures, etc.) to ensure the efficient and effective flow down of the defined safety program". As part of the IP, each directorate is to provide a Requirements Matrix that will provide the flow down of critical requirements from the LLNL Description and the LLNL ES&H Manual through the directorate level ES&H Plan to the worker.

The Requirements Matrix cross references the Description requirements to the ES&H Manual and then to the directorate-level documents used to carry out the requirements of the Description.

The directorate IPs from Chemistry & Materials Science (C&MS), Biology & Biotechnology Research Programs (BBRP), Laser Programs, and Physics were reviewed. Each of the four IPs was found to be acceptable in implementing the requirements of the institutional ISMS Description. In particular, the C&MS IP demonstrated above average content, clarity, completeness, and detail. Physics and BBRP IPs were also very well written.

The Laser Programs IP, while adequate, had several problem areas. The following are examples of the need for greater attention to detail in the preparation and maintenance of a document of this importance:

- The documents referenced in Section 8.2 are not the latest revisions.

- The roles and responsibilities for different positions in the IP do not match those listed in the Facility Management Plan.
- In several places in the Requirements Matrix, the wrong section of the implementing document is listed in the Directorate Implementing Procedures & Documents column.
- The Requirements Matrix also lists an uncontrolled document (the Laser Programs ISM Reference Guide) as an implementing document. While this document has some useful information in it to assist the reader in understanding the ISM System, it is not a controlled document and as such should not be used to implement this program. Additionally, it was found that several of the sections in the Reference Guide did not have the latest available revision of the document.

On the first of October, NIF Programs will become an independent directorate and the remaining Laser Programs will be merged with Physics to form the Physics and Advanced Technologies (PAT) Directorate. The draft IPs (without the Requirements Matrix) for the two new directorates were reviewed. The PAT IP is substantially modeled from the existing Physics IP, while the NIF Programs IP is modeled after the existing Lasers IP. In both cases there are some changes made to clarify items or to incorporate best practices. For example, the draft PAT IP revises the roles and responsibilities of the Facility Manager. Similarly, the NIF Programs IP incorporates references to NIF Projects. With correction of the items noted above for the Lasers IP (in the new NIF Programs IP), both of the plans should adequately describe the implementation of the institutional ISMS requirements within the directorates.

The laboratory also provided briefings on the status and plans for the transition (beginning October first) to the new directorates. Since both directorates will substantially use existing institutional guidance and existing personnel, the transition to the new organizations should be accomplished without significant problems in protecting the health and safety of the workers.

2. Plans, programs, and processes are in place to ensure the remaining gaps between the practices and processes identified in the ISMS Description and actual practice are identified and will be completed in a timely manner.

The Gap Analysis for each directorate was reviewed. C&MS has six open items. However, five of those are updates to documents, which are scheduled for completion by the end of September 2000. The long lead item is the conversion of Bases for Interim Operations (BIOs) to Safety Analysis Reports (SARs) for three explosive facilities at Site 300. The BIOs are currently in review by DOE/OAK and the SARs are scheduled for completion by September 2005.

BBRP has three open items in its Gap Analysis. Two of these involve FSPs that are under revision. They are scheduled for completion by the end of September 2000. The longer-term item is the development of an Injury Prevention Document. That is scheduled for completion and implementation by January 2001.

Laser Programs currently has four safety documents under review by ES&H Team 2, with a scheduled completion date of September 2000. They have a facility review and categorization document under preparation that is scheduled for completion by January 2001.

Physics has several open items that are being addressed. The SAR for B251 has been withdrawn to finalize the seismic analysis, which is currently incomplete. This will be done in concert with the institution wide seismic analysis tentatively planned for early in FY01. The Safety Analysis Document (SAD) for B194 has been submitted to DOE/OAK for review. Scheduled completion is set for February 2001. A Screening Report (SCR) is currently being prepared for B341. It is expected that as a result of the SCR, a Hazard Analysis Report (HAR) will need to be done and is tentatively scheduled for February 2001. An SCR is currently being done for B282. No expectations have yet been identified, but completion is presently planned for October 2000.

To ensure that each of the directorates had appropriately addressed the areas where they had indicated that no gap existed, several areas were selected and the path to the conclusion of "no gap" was followed. For the selected areas, each of the directorates was successful in showing their path to the conclusion of "no gap." The Laser Program IP reference was acceptable for one of the areas investigated and confirmed that there was no gap. However, the second area reviewed made reference to the Laser Programs ISM Reference Guide. And while the information there would be sufficient to conclude that "no gap" existed, the discussion of Criterion 1 (related to the fact that the Guide is not a controlled document and that some of the information contained in it is out of date) is applicable here.

Review of the IPs for each of the four directorates and the flow down of documents determined that the directorates have the necessary plans, programs, and/or processes in place to address the identified gaps. These plans track the gaps that are being worked, and identify timely completion dates for corrective actions. They also provide a means to follow the open items to closure.

Based on review of the Directorate IPs, the Directorate Gap Analyses and the progress of work underway to close out the open items, each of the four directorates have met this criterion.

3. Procedures and/or mechanisms that require line management to identify and prioritize work (mission related tasks and processes, modifications, and work items) are in place, roles and responsibilities are documented, and utilized by personnel.

Each of the Directorates receives funding from several different sources over the course of their operating FY. They can receive funding from internal Laboratory sources, such as general and administrative (G&A), Laboratory Directed Research and Development (LDRD), Overhead Facility Charges (OFC), General Plant Projects (GPP), etc. They can also receive funding directly from the DOE or other organizations both governmental and non-governmental (work for others).

While the source of funding is not of the utmost importance, what is of the utmost importance is the necessity for each directorate to have mechanisms in place to identify and prioritize the work. To assure that all work performed by the Laboratory is covered appropriately for ES&H, all internally funded activities include the cost of the necessary ES&H activities. For the funding provided by outside sources, an ES&H evaluation of the proposed work is performed and an

estimate of the needed ES&H involvement is provided to assure that the necessary funding is available.

In reviewing each directorate's IP, or documents referenced and utilized in concert with the IP, it is quite clear that the roles and responsibilities of all involved personnel are well defined, documented, and utilized by the personnel involved. All of the personnel interviewed understood the methods to identify those roles and responsibilities, as well as the procedures and mechanisms available for identifying and prioritizing the work needed to conduct a specific activity.

Review of each Directorate IP Requirements Matrix found that several did have references to documents that addressed the budget process and funding for ES&H activities. C&MS references their IP to address program and budget guidance and has several different sections that adequately address how they ensure that funding is available to cover ES&H activities for all of their work.

The Physics IP states that program and budget execution guidance is not applicable. It does not address whether or not the directorate utilizes the LLNL Financial Policies and Procedures Manual. Yet when reviewing the IP, it is clear that certain positions are responsible for assuring funds are available for ES&H activities. Additionally, there is a section entitled ES&H Resource Allocation that discusses this activity. In order to assure that there is a reference to the Resource Allocation discussion in the IP, a reference to that section should be placed in the matrix.

The BBRP IP also makes the statement that budget execution guidance is not applicable to them. Review of the IP also found that one of the responsibilities of the AM is to assure that the OFC budget for ES&H support for all Program activities is available as needed. Discussion with the AM has also verified that all of the ES&H activity funding for BBRP comes from OFC. It is suggested that the BBRP IP be revised to add a section that explains their process and then add that section to the matrix.

Based on review of the Directorate IPs, other associated documents, and interviews with Directorate personnel, each of the four Directorates have met this criterion.

4. Personnel whose role is to participate in the identification and prioritization of these mission-related items demonstrate competence to execute their responsibilities.

Each of the Directorate IPs, or a supporting document referenced by the IP, provided detailed information related to the roles and responsibilities of the personnel in the positions required to make decisions related to identification and prioritization of mission-related work or activity related items. Also, mechanisms, such as Facility Safety Plans (FSPs), Operations Safety Plans (OSPs), and Integration Work Sheet (IWSs), are in place to determine that the personnel appointed to fill these positions have the necessary knowledge, skill, abilities and training to execute their responsibilities.

All of the persons interviewed demonstrated a firm grasp of their particular Directorate IP and the documents referenced, which are used to identify and prioritize the work. They understand the use of FSPs, OSPs, and IWSs in identifying the required competent personnel to execute the

work. All demonstrated an understanding that an integral part of the responsibility of identifying and prioritizing the work is the responsibility to identify the hazards and the mitigating controls necessary to conduct the work safely.

Based on the review of documents and the personnel interviews, the Directorates have met this criterion.

5. **Procedures and/or mechanisms are in place and utilized by personnel that ensure identified work (i.e., mission-related tasks and processes, facility or process modification, maintenance work, etc.) can be accomplished within the standards and requirements identified for the facility**.

The LLNL ES&H Manual defines the mechanisms and responsibilities necessary to ensure that work can be carried out safely within a facility at LLNL. From there, requirements flow down to the Directorate Implementation Plans and directorate specific plans and programs until they reach the FSPs and/or OSPs and then the IWSs.

Depending on the duration of the work, some degree of long range planning may be required to take into account scheduled facility maintenance or facility modifications. The Work Smart Standards must be identified as well as any additional standards or requirements necessary for the facility and/or the specific work. These activities must be taken into account when formulating the IWS. Other activities must also be considered such as training, qualifications, use of subcontractors, etc.

All of these activities are identified in the Directorate IP when they specify the roles and responsibilities of the personnel whose task it is to perform each role necessary to conduct the specific work in a safe manner.

Based on review of directorate documents and interviews with directorate personnel and their explanation of the use of their procedures and mechanisms, there is a high level of confidence that at the Deputy Associate Director (DAD) and Facility Manager levels, the Directorates have met this criterion.

6. **Procedures and/or mechanisms are in place and implemented to provide for change control of approved tasks, prioritization, and identification of resources.**

Review of the Directorate IPs and the associated reference programs/plans indicated that they contain the methods necessary to process changes in approved tasks or prioritization, and to identify and redistribute resources as needed to do the work safely. All of the personnel interviewed were able to discuss and explain how changes are made and how the change mechanisms are used to ensure that ES&H activities are an integral part of the change process.

The IPs themselves were lacking in discussion of change control, but review of the roles and responsibilities and other flow down documents did find that change control was an integral part

of the process. The personnel responsible for the implementation of the FSPs, OSPs, and IWSs also play a major role in assuring that ES&H is implemented for all applicable changes.

Based on this information review and interviews, the Directorates have met this criterion.

7. **Processes implement DEAR 970.5204-2*, Integration of Environment, Safety and Health into Work Planning and Execution*, requirements into sub-contracts involving complex or hazardous work.**

To meet the requirements of DOE, the LLNL ISM Description requires that ES&H be an integral part of all subcontractors or vendors doing work for LLNL. This is implemented across LLNL through use of the Laboratory Procurement Policy and Standards Practice Manual, the LLNL ES&H Manual and the Commercial Procurement Practices Manual.

In discussions with interviewees, it was determined that each Directorate works with Procurement to get outside subcontractors or vendors to do work for them. As part of the process, the DEAR requirement to include *Integration of ES&H into Work Planning and Execution* is a standard attachment to every subcontract or contract for work done for LLNL.

An interview with a representative of Procurement confirmed that the DEAR requirement is a standard attachment to each contract or subcontract executed by LLNL. Several subcontracts were also reviewed and found to contain the required attachment, as well as reference to the document in a section of the contract called Incorporated Documents.

Based on this activity and my reviews and interviews, the Directorates have met this criterion.

Conclusion: An integrated process has been established that can identify and prioritize mission specific tasks, process operations, modifications and work items. The Objective has been met.

Strength(s): None

Issue(s): None

Team Member: _____ Warren Hall	Team Leader: _____ James Winter